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ABSTRACT

The research reported here is an exploration of the effects of Culture Assimilator Training. A procedure emphasizing behavior with respect to hardcore unemployed blacks was utilized for the training. White male university students were randomly assigned to a trained or untrained group. After the training, subjects were placed in a situation requiring that they work with a black confederate of the experimenters on a complex performance task. Each black confederate worked with both trained and untrained subjects. The confederates did not know who were the trained subjects. They rated the subjects on a number of dimensions, thus providing us with indices of the effectiveness of the trained and untrained subjects in interpersonal relationships while doing the task. A multi-method assessment of the dependent variables shows that the assimilator improves the attributions that the white subjects make concerning the causes of the behavior of blacks, reduces the perceived conflict between blacks and whites, and makes whites more tolerant of blacks who are dressed in a mod or hip fashion. On the other hand, there is no evidence of favorable change in the behavior of the whites. The optimal combination of assimilator training with other forms of training is discussed. (Author/JM)

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Illinois Studies of the Economically Disadvantaged

A Laboratory Test of the Effects of Culture Assimilator Training

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Preface

This report is part of a series which is concerned with the economically disadvantaged. We have shown in previous reports that economic disadvantages create characteristic ways of perceiving and thinking about the social environment. These ways differ from the way the mainstream views the world, and create barriers to cooperation between a disadvantaged employee and his supervisor. Such barriers make it difficult for the employee to hold a job.

The culture assimilator is a training procedure designed to explain to members of one culture how members of another culture view the world. It is hoped that such training will improve the changes of an economically disadvantaged employee to work with a boss from the mainstream.

In the present report we examine in great detail the effects of training white persons with the assimilator designed for the training of white supervisors to interact effectively with black workers. We show that training has some of the anticipated desirable effects, at the perceptual and conceptual level, but apparently does not change the behavior of the white. It is suggested that assimilator training might be optimally combined with behavior modification approaches, or other kinds of training.

H. C. Triandis

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A LABORATORY TEST OF THE EFFECTS OF CULTURE ASSIMILATOR TRAINING[1]

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Intercultural relations have become an increasingly important topic. Early discussions of prejudice and discrimination (e.g., Harding, Proshansky, Kutner & Chein, 1969) focused on a broad range of determinants of intercultural behavior. Many of these involve defense mechanisms or responses to loss of status or frustration.

However, even if we were to eliminate the effects of defense mechanisms on prejudice, intercultural relations would not be as easy as relations between people of the same culture. The reason for this is that a good deal of social behavior is determined by a person's subjective culture; that is, his cultural group's characteristic way of looking at the social environment. This includes norms, roles, and expectations concerning the determinants of behavior, as well as perceptions of the consequences of behavior.

A recent analysis of intercultural behavior (Triandis, 1974) discussed the attributions that people make concerning the causes of another person's behavior. When members of two different cultures interact, the attributions that each makes about the causes of the other's behavior are crucial determinants of how that behavior will be evaluated. For example, if a European asks an American cleaning lady to clean his shoes, she may be seriously offended, since she defines her job as that of cleaning the house, but not shoes. She may see this behavior as due to the European's obnoxiousness and haughtiness. On the other hand, she will not be seriously offended

if she perceives the request as due to an ignorance of American norms concerning the job "cleaning lady." In short, it is not the behavior itself which causes negative reactions; rather it is attributions of the cause of the behavior which provoke a hostile response. It follows that if a person is aware of the cultural basis for another person's behavior, there is less chance that the attributions he makes will lead to hostile relations.

Triandis (1974) used the concept of isomorphic attributions to discuss situations in which a person (P) attributes the behavior of another (O) to the same causes to which O attributes his own behavior. When isomorphic attributions occur, each person is particularly likely to appreciate why the other has acted the way he has.

People who live in highly homogeneous cultures are likely to make more or less isomorphic attributions. However, people who are reared in different cultures are likely to have different norms, role concepts and views of the causes of behavior. Such differences are likely to make their relationships particularly difficult. This is not to say that difficult relationships will not occur in homogeneous cultures. All that is said here is that one source of difficulty is eliminated in homogeneous cultural settings.

Jones and Nisbett (1972) have reviewed evidence suggesting that the actor tends to see his behavior as under the control of environmental (external) causes, while the observer tends to see the actor's behavior as caused by (internal) personality dispositions. Supporting this view, About and Taylor (1971) found that people use external causes (norms and roles) when explaining the behavior of members of their own ingroup, while they use internal causes (personality dispositions) when they explain the behavior of members of their outgroups. It would seem then that isomorphic attributions are extremely rare when P and O belong to different cultures.

One procedure which has been suggested (Triandis, 1974) as a method for increasing the frequency of isomorphic attributions is the use of the Culture Assimilator (see Fiedler, Mitchell, & Triandis, 1971). This approach to cultural training employs a programmed learning format. The trainee is presented with an incident involving conflict between members of his group and members of another cultural group. He is asked to analyze the reasons for the behavior of the members of the other group. Several attributions concerning the behavior of members of the other cultural group are presented. One of these is "correct" and three others are "incorrect" from the perspective of the other cultural group. The subject is required to select one of the attributions. He then turns to a page where he receives feedback. If he selects the "wrong" attribution, he is told to re-analyze the incident and to select another attribution. If he selects the "correct" attribution, he is complimented and told why that is indeed the right way of looking at the incident. In short, he is "reinforced" for making attributions isomorphic with those of another cultural group.

A set of approximately 100 incidents provides the subject with a good deal of information about the subjective culture of a target group and trains him to perceive the social environment in ways which are similar to those of the target group.

For example, an American might be trained to analyze an interpersonal incident the way a person from Thailand might analyze it. The determination of which analysis is "correct" is made by asking a panel of Americans and Thais to react to the various attributions. When an attribution is selected by the Thai and is not selected by the American panel, it is considered "correct" for the purposes of training the American to understand the Thai point of view.

The present paper is an exploration of the effects of Culture Assimilator training. Several kinds of effects were hypothesized:

(1) Trained persons should see the behavior of persons from other cultures as more "rational," i.e., as due to their intentions to behave rather than to their habits or blind impulses. In short, they should see this behavior as more understandable. This follows from the fact that training provides a subject with attributions which he has not encountered in his previous social experience. These attributions help him to "explain" and appreciate behaviors he formerly could not understand.

(2) The Culture Assimilator trained would be more likely to attribute the behavior of members of the other culture to external causes rather than to internal personality dispositions. By making trainees more cognizant of their own attributions, training should counter habitual attribution tendencies.

(3) The Culture Assimilator trained would be more likely to make attributions that are isomorphic with those of members of the target culture.

(4) Culture Assimilator trained subjects would be more likely to pay attention to those characteristics of a target person which are really important for effective interpersonal behavior and ignore irrelevant characteristics of the target. For example, if the task requires competence in some skill, a trained subject would focus on the relative competence of group members rather than their race or culture. The extreme case here occurs in tribal societies where an incompetent member of one's tribe may be perceived as a more desirable coworker than a competent member of another tribe. Such judgments are usually inappropriate and it is hoped that the Culture Assimilator suppresses these tendencies.

(5) A person who has been trained with the Culture Assimilator might be seen as a more desirable coworker by a member of the target culture than an untrained person.

(6) Culture Assimilator trained subjects will stereotype members of the target group less than those who have not been trained. This follows from the increased understanding of target members' behavior.

(7) The interpersonal attitudes of Culture Assimilator trained subjects towards members of the target group will be more positive than the attitudes of those subjects who have not been trained.

The basic design of the study was to have white male university students randomly assigned to a trained or untrained group. A Culture Assimilator: For Interaction with the Economically Disadvantaged (Slobodin, Collins, Crayton, Feldman, Jaccard, Rissman & Weldon, 1972), emphasizing behavior with respect to hardcore unemployed blacks, was utilized for the training. Training required from 6-8 hours and was self-paced. After the training the subjects responded to several questionnaires designed to tap various aspects of their cognitive functioning with respect to blacks. In addition to this, they were placed in a situation requiring that they work with a black confederate of the experimenters. The task, which required a high degree of cooperation, consisted of running a small slot car on a track which was designed to randomly accelerate and decelerate the car at different points of the course, making smooth running of the car extremely difficult. Each black confederate worked with both trained and untrained subjects. The confederates did not know who were the trained subjects. They rated the subjects on a number of dimensions, thus providing us with indices of the effectiveness of the trained and untrained subjects in interpersonal

relationships while running the small slot car. Finally, a sample of these subjects returned six months later to take one more questionnaire.

Method

Subjects

A total of 128 white male University of Illinois students participated in the study. They volunteered in response to the following ad, which was read in beginning psychology courses, posted on campus bulletin boards, and placed in the school newspaper:

> Paid males wanted for human relations training study (involving factory type situations). Half of volunteers will participate for 14 hours; other half for 4 hours. Payment of two dollars per hour on completion of work.

Those volunteering were randomly assigned to either the trained or the untrained group.

Procedure

Half of the white subjects were randomly assigned to the Culture Assimilator training group. The design was a "post test only;" thus, all subjects were given the dependent measures. In addition to various questionnaires, to be described below, the subjects were required to participate in a slot-racing task.

Slot-racing task. Subjects were paired with a black experimental confederate to work on a complex performance task. Both were led by the experimenter from the waiting room to the experiment where they were told:

> "Our research group is interested in human relations, particularly in job settings. Therefore, we have designed a task which is similar, at least in some respects, to tasks found in industrial

settings. A supervisor and a worker will be required to coordinate efforts in order to achieve maximum performance. We are particularly interested in how race differences between supervisors and workers effect job efficiency and effectiveness. At this point, I'd like to determine which of you will be the supervisor and which the worker. Would you each pick a slip of paper and see what is marked on it. Whoever has the X will be the supervisor."

The paper slips were both marked with X's so that the white subject was always led to believe he had been randomly chosen as supervisor.

Subjects were then led to an adjoining room where a model slot car racing set was set up. The subjects were told that they were to cooperate in a race against time on the set, and that if they beat a certain designated time, both would receive a dollar bonus. As with store-bought sets of this type, the car speed was controlled by a trigger which subjects could manipulate. However, the car speed could also be controlled by a complicated control panel which had switches corresponding to different sections of track. Initially these switches were set in a random sequence (excluding off positions) such that the car moved very erratically despite even expert trigger control. Subjects were told that they could experiment with the set for ten minutes, in order to practice, and to reset the panel switches in more favorable positions. Switches and track sections had corresponding numbers to make the experimentation easier. However, the switch speed labels were taped over, which made it necessary to discover what effect each switch position would have on the car. The supervisor (white subject) was assigned to work the "trigger" and the worker (black

confederate) to work the panel board. The equipment layout made it impossible for either to see what the other was doing while operating the set, though they were permitted to leave their equipment in order to observe. They were told not to touch equipment other than that assigned to them. Additionally, the "worker" was told that he should follow the instructions given to him by the "supervisor" in order to more closely approximate a work situation.

Confederates had been previously instructed to:

"(1) Turn only those switches the 'supervisor' asks you to turn; (a) if the instruction is specific, do exactly as he says, no more; (b) if his instructions are vague (i.e., if he says 'turn switch 7'), turn it one position in either direction. (2) If the car stalls, wait for the supervisor to tell you whether to turn a switch or restart the panel, don't do it on your own. (3) Answer all questions or commands naturally; (a) you may handle beligerance or hollering any way you wish except for refusing to do the task; (b) if he asks your advice, pretend you don't know; (c) be helpful if it will not give you away or if he has not closed off that approach. (4) Above all, be yourself."

Communication and cooperation between the participants was necessary to maximize the car's speed. The dependent variables included the time needed to complete 5 1/2 laps and the number of errors (times the car went off the track).

Following this task the coworkers and confederates were asked to complete two scales of the Job Descriptive Index (JDI) developed by Smith, Kendall and Hulin (1969). The coworker scale was filled out by both subjects and confederates, and the supervisor scale was filled out by the confederate.

In addition, the subjects responded to a questionnaire intended to assess causal attributions concerning their performance. Subjects were asked to evaluate how much skill, effort, and luck they or their partner exhibited on various aspects of the road racing set. All questions were of the type:

How well did your partner set the track control switches?

_____:_____:_____:_____:_____:_____:_____:_____:_____

not very well — very well

Subjects were scheduled to appear for the racetrack task every 30 minutes; thus the black confederates worked with two "supervisors" every hour. One of each pair of subjects had always received assimilator training and the other was an untrained control. The order of appearance for the two was randomized and the confederates were not told which subjects were trained. After the confederate had worked with both of the subject "supervisors" he was asked to complete this preference questionnaire:

Which of the two did you most prefer as a supervisor?

The one you saw: _____ First

_____ Second

Which of the two did you personally like better?

The one you saw: _____ First

_____ Second

Which of the two did you think would be a better supervisor in a real job situation?

The one you saw: _____ First

_____ Second

Again, the ratings were always done "blind": The confederates could not know which subjects were trained and which were not.

One group of subject "supervisors" participated in the racetrack task before taking the battery of paper-and-pencil tests, while another took the paper-and-pencil tests first. Within each group, one-half of the subjects were trained and one-half were untrained. The analysis involved a 2 (trained or untrained) x 2 (racetrack first-racetrack second) design.

In order to control for the reactivity to the measurement of the various dependent variables, the questionnaire measures and slot racing task were counterbalanced as shown in Figure 1. Half the subjects participated in the slot racing task first and then took the several questionnaire measures in one of three counterbalanced orders. The other half responded in reverse order (see Figure 1).

Insert Figure 1 about here

Questionnaires

Attribution test. This test was designed to study the way people make judgments about the causes of other people's behavior. The subject first was asked to read a scene in which a disagreement had developed between a foreman and a worker.

We employed three scenes. In Scene 1 the disagreement concerned whether a particular job was the sort of job that people with self respect should do or an inhuman, impossible job. The foreman was portrayed as saying that the work had to be done and the worker was shown to object. In Scene 2 the foreman and the worker were in an argument concerning raises that the company had promised and did not give to its employees. The foreman found some extenuating circumstances in the company's action which the worker

refused to accept. In the third scene the foreman was attempting to get the worker to participate in a company recreational program, but the worker had no interest in participating in company activities beyond the eight hours that he was paid to be at the company.

In half the stories the workers were described as white and in the other half as black; in half the stories the foremen were white and in the other half the foremen were black. Thus, four combinations of race of foreman and of worker were used.

In half the stories the conflict was at a high level of abstraction involving values (e.g., Is taking responsibility for what goes on on-the-job a good thing?) and in the other half at a lower level of abstraction involving role conflict (e.g., who should do what?). All three scenes received by any subject were in the same cell of the above 2 x 2 x 2 design.

Previous work (Triandis, Weldon & Feldman, 1974) had shown that black subjects perceived disagreements over roles as more damaging to interpersonal relations than disagreements over values, while white subjects perceived disagreements over values as more damaging than disagreements over roles.

The complete design for the attribution test involved a 2 x 2 (race of foreman-race of worker) x 2 (trained or untrained) x 2 (disagreement at the level of roles or values) x 2 (source of attribution; foreman vs. worker) design. Each subject received three incidents describing role conflict or three incidents describing value conflict. The design is shown in Figure 2.

Insert Figure 2 about here

The subject's task was to indicate the probability that various "causes" explained the behaviors in the story. First they were asked whether the subject "intended" to behave the way he did or acted "without thinking." Second, the subject was asked to assume that the action was intended and to guess what the basis of the intention might have been. Specifically, did the person intend to do this because it "made him feel good," because "others important to him think that this is correct for him to do," or because "doing it would get him desirable goals." Further probing involved questions of why, if the person did it without even thinking, he had developed such habits. The habits could be due to the "external social environment in which he had lived" or to "the kind of person that he is." These questions were designed to tap, in greater detail, attributions of internal and external bases for the other's behavior. It was our hope that assimilator training would make the behavior appear more intentional, more under the control of norms and perceived consequences leading to desirable goals, and less under the control of impulses (it is fun to do, no matter what the consequences), or habits. Furthermore, even in the case of habits, the behavior would be seen by the Culture Assimilator trained as due to rewards that the person has received in his social environment (external causes) rather than the way the person is (internal causes). In short, the subject was asked to "play psychologist" and indicate what he considered the likely reasons for the behaviors that occurred in the particular incident.

After doing this, the subject was asked to imagine how each of the actors in the incident would react to the other. Specifically, he was asked to indicate how he thought each of the actors would rate the other on the dimensions of influential, good, powerful, active, clean, on-the-ball,

attractive, hardworking and strong. These tap the three classic semantic differential factors (Osgood, Suci & Tannenbaum, 1957). In addition he was asked to guess how each actor would react to the other on fifteen behavioral differential scales (Triandis, 1964), tapping the factors of respect, friendship, social distance, intimacy, and superordination.

Test of intercultural sensitivity (TICS). A test of intercultural sensitivity (TICS) was developed in conjunction with the Culture Assimilator. The test consists of 25 "critical incidents" selected from the pool of 200 originally developed for the Assimilator. Incidents were randomly selected from within each assimilator topic category, so as to fully reflect the teaching program. Each TICS incident was followed by one question concerning attributions and another one dealing with behavior. The attribution question asked why the black worker in the incident behaved as he did. The behavior question asked how the white in the incident should have responded to the black.

Potential responses were generated, evaluated, selected and scored with the aid of white and black pretest groups. An effort was made to include four kinds of responses to each TICS question: One popular with blacks, one popular with whites, one popular with both, and one popular with neither.

Respondents selected one of the four possibilities and were scored according to several systems. A "black criterion group" system scored responses according to the percentage of pretest blacks who had agreed that each was a "good" answer. Thus this system reflects how closely a respondent adheres to a black perspective on the questions. The "unweighted" black and white system awarded greatest credit to responses which were acceptable

to both blacks and whites. Progressively less credit was given for responses favored by only one race, those favored by one but disliked by the other, and those disliked by both. This system scores respondents for compatibility with both white and black cultures.

Employee evaluation test. This test, a modified "In-Basket" technique, was designed to determine whether or not an individual was paying attention to relevant aspects of a complex stimulus when evaluating the performance of a particular black employee.

The instructions were as follows:

"As the area supervisor of a chain of food stores, your job is to help evaluate some new personnel practices. Recently, under the influence of a court order, the company has changed its long-term policy of hiring only women as checkout clerks, and begun hiring men for these positions as well. This change is due to high rates of unemployment and availability of male workers, as well as a response to new federal guidelines.

You are now attempting to evaluate some of the new employees six months after the start of the experimental program. Reports from several stores, located in an urban, racially-integrated area, have just been received. It is your responsibility to evaluate each new employee's performance and the success of the program. To do this, you will read each of the Behavior Report Forms, and rate each employee as carefully and fairly as you can on the attached Employee Evaluation Form. Try to consider all the information you have in making each evaluation. Also, you

will be asked to decide whether each employee should be discharged, allowed to remain, given a raise, and/or be considered for possible promotion.

Please read all the Behavior Report Forms before filling out the Employee Evaluation Forms. Then, reread each Behavior Report Form, record the Employee Number on an Evaluation Form, and rate that employee. Remember to use all the information at your disposal, since that is the fairest way of evaluating an employee."

The stimuli consisted of a picture of each "employee" (either black or white) and written information describing his behavior, manner of dress and instances of his interaction with others. The behaviors attributed to each employee were selected from those reported by Fogli, Hulin and Blood (1971) and reflected three levels of adequate to inadequate performance. The employee was portrayed as having either a conservative, fashionable, or hippie appearance. The subject rated the stimulus person on a performance rating scale ranging from exceptional to extremely poor. The following rating categories were utilized: public relations, job attitude, job knowledge, relations with fellow employees, performance efficiency, accuracy and quality, dependability, attitude toward supervisor, and overall evaluation. The subject also rated the "growth future" of the employee, recommending one of the following actions:

Terminate immediately _____

Give 3 months probation _____

Retain at present level _____

Retain with increase in pay and consider for promotion _____

Promote at the first opportunity _____

The Employee Evaluation Test (EET) followed a 2 (black or white) x 3 (levels of performance) x 3 (types of appearance) x 2 (different pictures) design. The repetition of pictures was used to balance uncontrolled aspects of the physical attractiveness of the stimulus, so that our results would not be picture-specific.

MRAI. Subjects responded to items from the Multifactor Racial Attitude Inventory (Woodmansee & Cook, 1967). The original MRAI scale differentiated ten different kinds of attitudes towards blacks, constructed with the aid of factor analysis. Gray and Revelle (1972) reanalyzed the inventory by using a hierarchical cluster technique to locate factors with greater unidimensionality. Their analysis suggested four essentially independent subscales: public, private, black superiority and gradualism. The four highest loading items from each of these subscales were used in our experiment.

Personality judgment inventory. This questionnaire measured the tendency of the subjects to stereotype blacks. It was adapted from Feldman (1972). It consisted of 20 person attributes, such as conservative, intelligent and political, which had previously been found by Feldman to be typical of college students' racial and occupational stereotypes. The subjects were asked to select those attributes which applied to white professionals, black working class, black professionals and white working class. Stereotyping tendencies were measured on both the "racial stereotype" and "occupational stereotype" scales developed by Feldman.

Follow-up questionnaires. An attempt was made to recall all subjects, approximately six months after the experiment, in order to obtain additional information. Only thirty-three subjects were still on campus and could be

contacted. They returned to take an additional questionnaire. These subjects were about equally distributed in the cells of the 2 (trained-untrained) x 2 (racetrack first-racetrack second) design.

The subjects were asked to recall the racetrack situation as clearly as possible. They then responded to six questions about their evaluation apprehension, behavioral uncertainty, awareness of race as a variable under study, discomfort, task enjoyment and boredom. All questions employed a semantic differential format.

Analyses

Each of the questionnaires which yielded more than one dependent variable was analyzed by multivariate analysis of variance. The experimental-design method of least-squares for multivariate analysis of variance (Bock & Haggard, 1968; Overall & Klett, 1972) was utilized in the present study due to the appearance of disproportionate cell frequencies in the design. This method takes into account the experimental-design hierarchy of main effects and interactions, adjusting each effect for all other effects at an equal or lower level and ignoring higher order effects (Snedecor & Cochran, 1967; Winer, 1962).

Results

Since the analyses are numerous and complex, for ease of presentation we will follow the order of the seven hypotheses presented above.

1. Trained persons should see the behavior of persons from other cultures as due to their intentions to behave rather than as due to their habits or blind impulses. They should also see this behavior under "rational" determinants. Specifically, they should see the behavior under the control of norms and the perceived consequences of the behavior.

The multivariate analysis of variance of the attributions test revealed an effect of training significant at the .005 level. In addition, there was a significant difference in the way the subjects responded to the role vs. value conflict ($p < .0005$) and an interaction (significant at the $p < .006$ level) between the effects of training, level of disagreement (role vs. value) and race of worker (white vs. black).

With regard to our hypothesis, analysis of the training effects revealed that trained subjects tended to see a greater correlation between the actions observed in the scenes and the intentions of the actors than did untrained subjects. As expected, the trained subjects attributed the behavior to habits (doing what one always does) less frequently than the untrained. When asked to attribute behaviors to external as opposed to internal determinants of habit, however, the trained tended to attributed the habits to internal factors more than the untrained. In our theoretical analysis of the attribution process in intercultural relations, we stated that we expected the assimilator trained to see more behavior as intentional, more under the control of norms, more under the control of perceived desirable consequences and goals, less under the control of affect and less under the control of habits. Two of these predictions were supported by this test. The trained did see more intentional and less habitual behavior; however, they did not see significantly more behavior under normative control or under the control of perceived consequences (the means were in the right direction, but the differences were not significant) and they did not see behavior as less under impulsive control (again, the means were in the right direction but the differences did not reach significance).

2. The Culture Assimilator trained would be more likely to attribute the behavior of members of the other culture to external causes than to internal personality dispositions. This hypothesis was not supported, since there was no significant difference in the extent to which subjects saw the behavior of people in the various scenes as due to norms or to externally determined habits.

3. The Culture Assimilator trained would be more likely to make attributions that are isomorphic with the attributions of members of the target culture. Assimilator trained subjects scored significantly higher than untrained subjects on the Test of Intercultural Sensitivity attribution questions. This was true using either the black criterion scoring system ($p < .0006$) or the unweighted blacks and whites system ($p < .00005$). There were no significant differences between trained and untrained on the behavior questions.

The items in this test were entirely different from the assimilator items, although they were selected from the same pool of "critical incidents" utilized in the construction of the assimilator. Nevertheless, one could argue that the better performance of the trained subjects was due to their exposure to the assimilator format. Their improved performance might simply reflect their greater familiarity with the situations and questions used in the test. However, if exposure to the format were the basis for the improved performance, there should also have been an improvement in their scores on the behavior questions as well. This was not the case and, therefore, we believe that the trained subjects learned to make more accurate attributions.

4. Culture Assimilator trained subjects would be more likely to pay attention to those characteristics of a target person which are really important for effective interpersonal behavior and ignore irrelevant characteristics of the target.

The employee evaluation test was designed to tap changes in the extent to which the trained persons focused on relevant characteristics, such as employee performance, as opposed to irrelevant characteristics, such as employee dress or race. We obtained a training by race of worker by appearance of worker triple interaction significant at .009 level (multivariate test) reflecting the judgments of the subjects concerning the favorability of the employee's public relations ($p < .002$) and job attitudes ($p < .03$). Plots of the means revealed that the trained subjects were more favorable to black workers with "hip" or "mod" dress than they were to white workers with such dress. There were no differences in the ratings for conservative dress.

An interaction between training and performance level of the worker was also obtained ($p < .01$, multivariate), primarily reflecting differences in ratings of dependability. Plots of the means showed that the trained expected less dependability from workers who showed poor or medium performance than did the untrained. In addition, when the subjects rated the growth future of the employee, the trained tended to downgrade employees with poor or medium performance to a greater extent than did the untrained.

5. A person who has been trained with the Culture Assimilator might be seen as more desirable by blacks than one who has not been trained.

The analysis of the confederate preference data from the racetrack task yielded significantly different results depending on whether the supervisors

were in the racetrack-first group or the questionnaires-first group. Without consideration of this order effect, there were no differences between trained and untrained supervisors in terms of the confederates choices.

Within the racetrack-first group, untrained subjects were preferred as supervisors and personally liked better. This result was significant only for the preference-as-supervisor question ($x^2_{(1)} = 7.7658$, $p < .01$). These data are shown in Tables 1a and 2a. There was no significant deviation from chance on the "supervisor in real job" question, although the data is in the same direction.

Insert Tables 1 and 2 about here

The opposite finding was obtained with the questionnaire-first group: Trained subjects were preferred as supervisors and personally liked better. This result obtained significance only on the question of personal liking ($x^2_{(1)} = 4.3355$, $p < .05$). These data are illustrated in Tables 1b and 2b. Again, the "supervisor in real job" question yielded no significant results, but the data was in the same direction.

In short, among those subjects who have not taken the questionnaires, the untrained are preferred, while among those who have, the trained are preferred. The interaction of racetrack order with training and confederate preference is significant for both the first and second questions. On the first question--"preference as supervisor"--the interaction is significant at the .005 level ($x^2_{(1)} = 8.8008$); and on the second--"personal likability"--the interaction is significant at the .01 level ($x^2_{(1)} = 6.7455$).

This data does not unequivocally support the hypothesis that Culture Assimilator trained subjects would be preferred to untrained. In fact, in one of two conditions, the opposite result was obtained. Certain unplanned biases in the experiment may be obscuring the expected superiority of the trained subjects. This possibility, supported by results of a follow-up questionnaire, will be discussed below.

6. Culture Assimilator trained subjects will stereotype members of the target group less than those who have not been trained.

The mean response to all four stimuli on the Race scale of the Personality Judgment Inventory (Feldman, 1972) involved endorsement of 37% of the race items. Feldman found that the "black" stereotype was that of a "lower-lower class black." For the professional scale the endorsement rate was 46% of the professional items.

On the Race scale black stimulus persons received 30% endorsement of the black stereotype items from all subjects and white stimulus persons 44%. Arcsin transformations were applied to allow ANOVAs. A significant difference ($p < .0005$) in the mean responses to black and white stimuli was found. This means that the subjects were attempting to be as liberal as possible by refusing to endorse racial stereotypes and did so more for the black than the white stimuli. The interesting point is that the assimilator trained subjects were even more extreme than the untrained subjects in refusing to stereotype black stimuli. For black stimuli the difference between the trained and untrained was significant ($p < .04$) with the trained endorsing 26%, and the untrained 35%, of the racial attributes.

Consistent with Feldman's analysis, professional stimulus persons overlapped with the black stereotype 32% of the time while working-class stimulus persons overlapped 42% of the time giving a highly significant ($p < .0005$). tendency for professional stimulus persons to be seen as less "black." Black professionals were particularly likely to be seen as not "black" and working-class blacks were significantly ($p < .0005$) less "black" than working-class whites. Consistent with the tendency towards highly liberal responses, the subjects stereotyped black stimuli as higher on the professional scale (50%) than they stereotyped white stimuli (43%). Supporting the validity of Feldman's stereotype scales, the professional stimuli were seen as high on the professional stereotype (65%) and the working-class stimuli were seen as low (28%).

7. The interpersonal attitudes of Culture Assimilator trained subjects towards members of the target group will be more positive than the attitudes of those subjects who have not been trained.

The assimilator trained subjects responded in a significantly ($p < .02$) different way from the untrained subjects to the semantic and behavioral differentials designed to measure their perception of interpersonal conflict in the three scenes in which black and white persons were in disagreement. Plots of the means showed that the trained judged that the black and white people in the scenes would give to each other higher evaluation, potency and activity ratings; the trained saw less "superordination," less "social distance with hostility" and more "friendship" in the case of blacks and whites in conflict situations. Several interactions between training and other factors were obtained; specifically, the trained saw more positive evaluations by the white worker ($p < .0005$) than did the untrained; the

trained saw more positive evaluations by the black foreman ($p < .004$) than did the untrained; the trained saw a white foreman evaluating a black worker more negatively than did the untrained ($p < .03$); the trained saw less social distance in general and less social distance towards black workers in particular ($p < .02$); the trained saw less conflict between a white foreman and black workers than did the untrained, as revealed in the social distance judgments ($p < .01$).

No effects. Training produced no changes in the performance scores on the car racing task, or the multifactor racial attitude inventory (MRAI). Analysis of variance revealed no differences in responding (at the .05 level) between trained and untrained subjects. On the MRAI the combined group of experimental subjects appeared to differ significantly from the college sample cited by Gray and Revelle (1972)[3]. Their study involved 181 students in an Introductory Psychology class in a western Pennsylvania liberal arts college. Subjects in the current study were University of Illinois students recruited from the entire student body. Our group responded with more "egalitarian" views on the four Public subscale items ($t = 2.50$, $p < .02$) than did the Pennsylvania subjects. This subscale reflects attitudes relating to public and business behaviors. The current sample was also more egalitarian on the Gradualism scale, reflecting the view that civil rights changes should be more quickly accomplished ($t = 2.00$, $p < .06$). However, subjects in the current study were significantly less egalitarian on the Private subscale, which tapped personal willingness to engage in social relations with blacks ($t = 3.15$, $p < .002$). No significant difference was obtained on the Black Superiority subscale. The Black Superiority subscale consists of items suggesting that past experiences have caused blacks to be superior to whites in some respect.

Discussion

The Culture Assimilator appears to have produced a change in a number of ways. From the point of view of improving interpersonal relations, some of these are desirable while others are not. The desirable ones have been anticipated and are consistent with the hypotheses, while the undesirable ones were not anticipated. Some additional findings were consistent with the hypotheses, but did not reach significance.

More specifically, we can count among the desirable outcomes the fact that the trained subjects saw more intentional causes and fewer blind habits in the behavior of blacks and whites in conflict situations. Furthermore, and this is perhaps the most important finding, they did make more isomorphic attributions than the untrained subjects. Moreover, the trained subjects apparently developed a tolerance for blacks dressed in "hip" attire, which the untrained did not display. The trained also saw a stronger connection between the performance of an employee and his dependability than did the untrained. Finally, the trained perceived less conflict, in general, in situations where there were interracial disagreements; they saw white workers as more positive towards black supervisors and black foremen as more positive towards white workers; and they also seemed to accept the idea of greater prejudice by white foremen towards black workers (probably a more realistic viewpoint).

The Racetrack Order-Preference Interaction

The major undesirable effect of assimilator training is suggested by the preferences of our confederates on the racetrack task. Apparently subjects coming directly out of assimilator training are more difficult for the confederate to work with than subjects who have just joined the experiment.

This is most clearly reflected in the confederate preferences for the untrained as supervisors, while likeability and "real job supervisor" ratings are in the same direction but not significant. Although the trained subject has learned to make appropriate attributions concerning the black's behavior, he appears not to have learned appropriate responses to that behavior. Data from the Test of Intercultural Sensitivity support this interpretation. Trained white subjects were significantly more like the black criterion group (compared to untrained subjects) in their attributions regarding black behaviors in the TICS incidents. However, the trained subjects did no better than the untrained in selecting appropriate behavioral responses for the whites in the incidents. Thus, while the assimilator is quite effective in achieving desired improvements in attributions, it is deficient in providing a basis for behavior modification.

A careful examination of the observations of the experimenters, as well as the ratings that the confederates made, suggests that the trained white subjects in the racetrack-first condition appeared distracted and unnatural, while the untrained behaved more "like themselves." Several possibilities are suggested:

(1) The Assimilator may increase the subject's uncertainty concerning what is proper behavior for him. This may be because the behaviors he has learned from assimilator training conflict with his characteristic responses, or because the training has failed to teach new behaviors altogether. The latter possibility is most consistent with the Test of Intercultural Sensitivity (TICS) finding that trained and untrained subjects did not differ significantly in their selection of appropriate behavioral responses. TICS also demonstrated the clear superiority of trained subjects in making

"correct" attributions concerning the behavior of blacks. These new attributions may conflict with subjects' usual ways of acting towards blacks. Or the training may in other ways suggest the inadequacy of many characteristic white responses. In any case, uncertainty in the selection of responses may make trained subjects in this condition appear awkward or unpleasant, and diminish their appeal to the confederates.

(2) The Assimilator may heighten awareness of race to the point where it interferes with social interaction. Although parts of the Assimilator are intended to decrease attention to race and race differences, the total impact of the program on racially unaware college students may be just the opposite. They may try so hard not to pay attention to the confederate's race that they fall all over him.

(3) The experimental situation may have demand characteristics which reduce trained subject's effectiveness. Probably he has assumed that some testing of the assimilator training was likely to occur. When confronted with the racetrack situation, he may feel this is the crucial test of his learning. Resultant "evaluation apprehension" could interfere with his functioning in the situation.

Any one of these factors, or the three in conjunction, may diminish the trained subjects' interpersonal effectiveness in the racetrack-first situation. The untrained subject thus has the advantage: He may have more confidence in his usual interpersonal behaviors, or may be less conscious of race, or less concerned with the evaluative aspects of the situation. The confederate apparently finds the more relaxed untrained subjects easier to work with.

The situation is altered in several ways for those subjects who take the paper-and-pencil test battery before participating in the racetrack task. It is likely that the questionnaires sensitize untrained subjects to race, so that both trained and untrained subjects are on equal footing. Similarly, the questionnaire session may increase untrained subjects' sensitivity to the evaluative aspect of the situation. At the same time it may diminish trained subjects' evaluation apprehension by allowing them to "spread" their performance over several different tasks. Finally, the additional time lapse between training and the racetrack task (7-8 days rather than 3-4 in the racetrack-first condition) may reduce trained subjects' behavioral uncertainty. The additional time may allow the subjects to forget or integrate their newly learned lessons with their characteristic responses. When awareness or evaluation apprehension are thus "equalized," or behavioral uncertainty reduced, trained subjects benefit from assimilator training. Under these circumstances, confederates show a preference for the trained subjects.

Follow-Up Questionnaire

To gain additional information concerning these possibilities, 33 subjects returned after several months and responded to questionnaires. Confederate preference data was available for 22 of these, but failed to replicate the training x questionnaire interaction noted above, casting doubt on the representativeness of this sample. Subsequent analyses indicated that there was the expected negative correlation between supervisor preference and training for the racetrack-first group ($r = -.69$, $p < .09$)[4], but the expected positive correlation in the racetrack-second condition was not found.

The follow-up questionnaire revealed that the trained subjects rated themselves as more aware of the evaluative aspects of the racetrace situation than the untrained ($F = 2.98$, $p < .10$). However, the expected interaction with questionnaire-racetrack order, while in the predicted direction, was not significant for this small sample size. As expected, self-ratings of evaluation apprehension were negatively correlated with confederates' preferences for the supervisor ($r = -.52$, $p < .01$, $n = 22$). This relationship was strong in the racetrack-first condition ($r = -.64$, $p < .02$, $n = 11$) and somewhat weaker in the racetrack-second condition ($r = -.41$, N.S., $n = 11$). This provides some support for the notion that evaluation apprehension plays an important role when the racetrack task precedes the questionnaires, and a weaker role afterwards.

Self reports of racial awareness did not correlate significantly with confederate preferences over all subjects. A moderate positive correlation ($r = .52$, $p < .10$, $n = 11$) was observed between race awareness and preference in the racetrack-first condition. Since race awareness was also negatively correlated with evaluation apprehension ($r = -.67$, $p < .02$, $n = 11$), this effect could be removed by partialling out evaluation apprehension. Insofar as these relationships are significant, they require some rethinking of the impact of race awareness (as self-reported) in this setting. Apparently attention to the racial aspects of the interracial situation has positive rather than negative consequences for the white subject. Rather than interfering with his social performance, it enhances his success. However, evaluation apprehension would seem to direct attention away from race, possibly to socially extraneous stimuli like the experimenter, the task itself, or one's own activity. In a sense, then, the subject may have a

choice as to which stimuli he directs his attention towards, and this in turn may have consequences for his social performance.

Self-ratings of behavioral uncertainty were not significantly correlated with confederate preferences across the entire group of subjects, or within subgroups of training or racetrack order. These self-ratings were negatively correlated with reported task enjoyment, but appeared to have neither direct nor indirect consequences for confederate preferences.

Self-reports on the other variables (discomfort, task enjoyment and boredom) did not relate significantly to confederate preferences, although they interacted with other prediction variables in predictable ways.

This self-report data most strongly supports the idea that "evaluation apprehension" in the trained group led to confederates' relative preferences for the untrained subjects, when the task occurred prior to the questionnaires. This may have been due to the trained subjects' preoccupation with socially irrelevant stimuli, while the untrained paid more attention to the black confederate. Apparently the questionnaires raised the evaluation apprehension for the untrained, while diminishing it for the trained, negating its influence in the racetrack-second condition. Under these circumstances the benefits of the assimilator training took hold, and allowed the trained subjects to excell.

Conclusion

Although several trends were in the hypothesized direction, the non-significant findings cast doubt on the effectiveness of the assimilator. First, the trained subjects did not see a greater connection between norms and perceived consequences of a behavior and the behavior. Neither did they see impulsive or affectively controlled behavior as less likely than did the

untrained subjects. Second, the trained did not select external causes over internal causes as determinants of the habits of blacks and whites described in the interracial conflict scenes. Apparently, then, the Culture Assimilator did not go far enough in making the person aware of the importance of the environment and the situation as a determinant of a person's behavior. Perhaps the fact that we did not make this point explicit in the Culture Assimilator is responsible for this negative finding. Also, the attribution of another's behavior may be so strongly learned (Jones and Nisbett) that it cannot be reversed with a few hours of assimilator training.

A couple of interesting methodological points emerge from an examination of the instruments which did show and those which did not reflect the influence of training. Apparently neither the Feldman stereotype scale nor the more traditional scales which measure interracial attitudes are appropriate for this type of research. The Feldman scale, when used in this context, is strongly influenced by a liberal norm to avoid stereotyping blacks. The result is that training simply made the individual even more liberal in avoiding such stereotyping, but this may have been due to the demand characteristics of the experiment. Obviously the subjects tell themselves "The emperimenter wants me to be liberal" and they perform accordingly. In this context, the fact that they did not change on the multifactor racial attitude inventory suggests that while they were willing to avoid stereotyping blacks, they were not willing to change their position on important issues such as acceptance of blacks in intimate personal relationships.

The evidence confirms the effectiveness of assimilator training in increasing isomorphic attributions, but is equivocal in its support for assimilator induced changes in behavior. Certainly the fact that training

opens a person's perspectives so that he can learn more about another culture is a desirable effect, but it was hoped that training would also lead to behavioral consequences. Several possible explanations for this shortcoming have been considered. Among these the most optimistic, perhaps, is that the evaluative characteristics of this experiment interfered with trained subjects' attempts to utilize their knowledge. Another possibility is that the training fails to teach appropriate behaviors, or teaches them in a way which causes uncertainty concerning one's more natural ways of responding. If this is the case, some combination of assimilator training and behavior modification or confidence building practice sessions might provide the optimal approach.

In reviewing this manuscript, Dan Landis suggested that what is learned in the assimilator may require time to consolidate with existing knowledge. Landis writes: "If an interpersonal interaction occurs prior to consolidation, and if that interaction is anxiety producing, then the trained subject may fall back upon old responses with a new tenacity. However, if the interaction is pleasant and long enough to be productive and supportive of the new attributions, then the new patterns become fully integrated..." This is certainly plausible and obviously requires more research. It suggests the interposition between training and performance of tasks designed to create the experience of success in interactions with persons from other cultures. An even simpler approach would be to examine the effects of assimilator training across different tasks, rather than the single slot racing task of this experiment. Perhaps encounters over a period of days would allow trained subjects to "put to work" those attributions they have learned. The fact that the trained are more effective than the untrained in the racetrack

interactions when they do the questionnaires first and the race car second (which means they do the race car a week later) is certainly consistent with this interpretation.

In perspective, it is well to remember that the assimilator has been designed to increase isomorphic attributions and it does achieve that goal. However, this study shows that this may not be sufficient and suggests that other training needs to be added in order to reach the goal of improved interpersonal relations.

The results of this laboratory study may not replicate in an industrial setting. The evaluative apprehension which we found in this study may not have a parallel in the field. A more task-oriented situation may make the apprehension less important, and the trained employees may be able to utilize the assimilator knowledge to a greater advantage. A variety of other techniques (systematic densentization, assertion training, sensitivity training) might be combined with assimilator training. This sort of experimentation remains to be done.

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Footnotes

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2. Now at Washington University, St. Louis, Missouri.

3. The Gray and Revelle subscales contained more than the four high-loading items we borrowed from each. However, equivalent four-item means were calculable from the reported data. Variances could not be so calculated, and thus were set equal to those obtained in our study. As their sample size was larger (181 compared to 114) their subscale variances were probably equal or smaller than those used in the present analysis. Thus this analysis provides a conservative test of the differences between our data and theirs.

4. All tests reported in this section are two-tailed. A somewhat more liberal alpha level is used here due to the small sample and the fact that this analysis is an attempt to shed light on previously obtained results.

Table 1

Preferred as Supervisor

A. Racetrack-First Condition

	Trained	Untrained
Chosen	6	14
Not Chosen	16	6

$\chi^2_{(1)} = 7.77$ $p < .01$

B. Racetrack-Second Condition

	Trained	Untrained
Chosen	13	11
Not Chosen	9	13

$\chi^2_{(1)} = 1.04$ (Not Significant)

Interaction between A and B: $\chi^2_{(1)} = 8.80$ $p < .005$

Table 2

Personally Liked Better

A. Racetrack-First Condition

	Trained	Untrained
Chosen	8	12
Not Chosen	14	8

$\chi^2_{(1)} = 2.41$ (Not Significant)

B. Racetrack-Second Condition

	Trained	Untrained
Chosen	15	9
Not Chosen	7	15

$\chi^2_{(1)} = 4.34$ $p < .05$

Interaction between A and B: $\chi^2_{(1)} = 6.75$ $p < .01$

Order No.	Order in Which Dependent Measures were Obtained					
1	RACETRACK			TICS & FRAI	EETS	WTS
2	RACETRACK			EETS	WTS	TICS & FRAI
3	RACETRACK			WTS	TICS & FRAI	EETS
4	TICS & FRAI	EETS	WTS	RACETRACK		
5	EETS	WTS	TICS & FRAI	RACETRACK		
6	WTS	TICS & FRAI	EETS	RACETRACK		

Figure 1. Experimental design for sequences of experiences.

		Source of Attribution: Foreman				Source of Attribution: Worker			
		White Foreman		Black Foreman		White Foreman		Black Foreman	
		White Worker	Black Worker	White Worker	Black Worker	White Worker	Black Worker	White Worker	Black Worker
Trained Subjects	Role Conflict								
	Value Conflict								
Untrained Subjects	Role Conflict								
	Value Conflict								

Figure 2. Experimental design for attribution test.